This listing of claims will replace all prior versions, and listings, of claims in the Application:

LISTING OF CLAIMS:

1. (Currently amended). A frame formatting method for introducing randomness to a fixed length master frame having a first number of bits comprising the steps of:

padding each of a plurality of variable length frames with a synchronization pattern and a ~~sufficient~~ quantity of random data, said quantity calculated to produce a plurality of fixed length frames, said plurality of fixed length frames comprising ~~having~~ a second number of bits; and

filling said fixed length master frame with said plurality of fixed length frames, such that said first ~~the~~ number of bits in said fixed length master frame equals the total second number of bits in said plurality of fixed length frames;

whereby randomness is increased in said fixed length master frame.

2. (Currently amended). A frame formatting method for introducing randomness to a fixed length master frame having a first number of bits comprising the steps of:

filling said fixed length master frame with a plurality of variable length frames, with each of said plurality of variable length frames introduced by a synchronization pattern, said plurality of frames comprising a second number of bits;

determining the existence of at least one unused bit, said unused bit comprising at least one bit from said first number of bits not filled by a bit from said second number of bits; and

filling each of said at least one ~~any~~ unused bit with ~~portions of said fixed length master frame with a plurality of~~ random data ~~bits~~, whereby randomness is increased in said first number of bits ~~fixed length master frame~~.

3. (Currently amended). A digital audio broadcasting frame formatting method for formatting a fixed length master frame defining a first number of bits comprising the steps of:

sampling, digitizing, and encoding an audio signal to derive a plurality of variable length frames;

padding each of said plurality of variable length frames with a synchronization pattern and a ~~sufficient~~ quantity of random data, said quantity calculated to produce a plurality of fixed length frames, said plurality of fixed length frames comprising ~~having each defining~~ a second number of bits; and

filling said fixed length master frame with said plurality of fixed length frames, ~~wherein the total~~ such that said first number of bits in said fixed length master frame equals said second number of bits in said plurality of fixed length frames ~~equals the number of bits in said fixed length master frame~~;

whereby randomness is introduced to said fixed length master frame.

4. (Currently amended). A digital audio broadcasting frame formatting method for formatting a fixed length master frame defining a first number of bits comprising the steps of:

sampling, digitizing, and encoding an audio signal to derive a plurality of variable length frames;

filling said fixed length master frame with said plurality of variable length frames, with each of said plurality of variable length frames introduced by a synchronization pattern, said plurality of frames comprising a second number of bits;

determining the existence of at least one unused bit, said unused bit comprising at least one bit from said first number of bits not filled by a bit from said second number of bits; and

filling each of said at least one ~~any~~ unused bit with ~~portions of said fixed length master frame with a plurality of~~ random data ~~bits~~, whereby randomness is increased in said first number of bits ~~fixed length master frame~~.

5. (Original). A digital broadcasting method comprising:

encoding a first analog signal, said step of encoding comprising sampling, digitizing, and encoding segments of said first analog signal and generating a plurality of variable length data frames corresponding to said segments;

filling a fixed length master frame with said plurality of variable length data frames, a plurality of synchronization patterns, and a plurality of random data;

modulating said fixed length master frame;

transmitting said modulated fixed length master frame over a channel;

receiving said modulated fixed length master frame from said channel;

demodulating said modulated fixed length master frame to derive said fixed length master frame;

de-formatting said fixed length master frame to remove said plurality of synchronization patterns and said plurality of random data bits to derive said plurality of variable length data frames corresponding to said segments; and

decoding said plurality of variable length data frames corresponding to said segments to produce a second analog signal.

6. (Original). The method of claim 5, wherein said step of filling said fixed length master frame with said plurality of variable length data frames, said plurality of synchronization patterns, and said plurality of random data comprises:

filling said fixed length master frame with said plurality of variable length data frames, with one of said plurality of synchronization patterns preceding each of said plurality of variable length data frames; and

filling any unused portions of said fixed length master frame with random data, whereby randomness is introduced to said fixed length master frame.

7. (Original). The method of claim 5, wherein said step of filling said fixed length master frame with said plurality of variable length data frames, said plurality of synchronization patterns, and said plurality of random data comprises:

padding each of said plurality of variable length frames with one of said plurality of synchronization patterns and a portion of said plurality of random data to produce a plurality of fixed length frames of equal length; and

entirely filling said fixed length master frame with said plurality of fixed length frames, such that the total length of said plurality of fixed length frames used to fill said fixed length master frame equals the length of said fixed length master frame;

whereby randomness is increased in said fixed length master frame.

8. (Currently amended). A digital broadcasting system comprising:

a variable rate encoder coupled to a first analog signal, said variable rate encoder sampling, digitizing, and encoding segments of said analog signal and generating a plurality of variable length data frames corresponding to said segments;

a formatter coupled to said variable rate encoder for creating a formatted fixed length master frame having a first number of bits from ~~out of~~ said plurality of variable length data frames by inserting a plurality of synchronization patterns and a plurality of random data bits;

a digital modulator coupled to said formatter for modulating said fixed length master frame to produce a modulated fixed length master frame;

a channel coupled to said digital modulator for carrying said modulated fixed length master frame;

a digital de-modulator coupled to said channel for de-modulating said modulated fixed length master frame to derive said fixed length master frame;

a de-formatter coupled to said digital de-modulator for removing said plurality of synchronization patterns and said plurality of random data bits to derive said plurality of variable length data frames corresponding to said segments; and

a variable rate decoder coupled to said de-formatter, said variable rate decoder decoding said plurality of variable length data frames corresponding to said segments and producing a second analog signal;

wherein broadcasting efficiency is increased in said digital broadcasting system by increasing randomness in said fixed length master frame.

9. (Original). The digital broadcasting system of claim 8, wherein said formatter formats said fixed length master frame by alternately filling said fixed length master frame with one of said plurality of synchronization patterns and one of said plurality of variable length data frames, and filling any unused portion of said fixed length master frame with said plurality of random data bits.

10. (Original). The digital broadcasting system of claim 9, wherein said digital broadcasting system is a digital audio broadcasting system.

11. (Currently amended). The digital broadcasting system of claim 8, wherein said formatter formats said fixed length master frame by padding each of said plurality of variable length data frames with one of said plurality of synchronization patterns and ~~a sufficient portion~~ at least one of said plurality of random data bits to produce a plurality of fixed length frames, said plurality of fixed length frames comprising a second number of bits, and filling said fixed length master frame with said plurality of fixed length frames, such that said first number of bits in said fixed length master frame equals said second number of bits in said plurality of fixed length frames ~~entirely fill said fixed length mater frame~~.

12. (Original). The digital broadcasting system of claim 11, wherein said digital broadcasting system is a digital audio broadcasting system.

13. (Currently amended). A digital broadcasting transmitter ~~system~~ comprising:

a variable rate encoder coupled to a first analog signal, said variable rate encoder sampling, digitizing, and encoding segments of said first analog signal and generating a plurality of variable length data frames corresponding to said segments;

a formatter coupled to said variable rate encoder for creating a formatted fixed length master frame having a first number of bits from ~~out of~~ said plurality of variable length data frames by inserting a plurality of synchronization patterns and a plurality of random data bits;

a digital modulator coupled to said formatter for modulating said fixed length master frame to produce a modulated fixed length master frame;

wherein broadcasting efficiency is increased in said digital broadcasting transmitter by introducing randomness to said fixed length master frame.

14. (Original). The digital broadcasting transmitter of claim 13, wherein said formatter formats said fixed length master frame by alternately filling said fixed length master frame with one of said plurality of synchronization patterns and one of said plurality of variable length data frames, and filling any unused portion of said fixed length master frame with said plurality of random data bits.

15. (Original). The digital broadcasting transmitter of claim 14, wherein said digital broadcasting transmitter is a digital audio broadcasting transmitter.

16. (Currently amended). The digital broadcasting transmitter of claim 13, wherein said formatter formats said fixed length master frame by padding each of said plurality of variable length data

frames with one of said plurality of synchronization patterns and ~~a sufficient portion~~ at least one of said plurality of random data bits to produce a plurality of fixed length frames, said fixed length frames comprising a second number of bits,, and filling said fixed length master frame with said plurality of fixed length frames, such that said first number of bits in said fixed length master frame equals said second number of bits in said plurality of fixed length frames ~~entirely fill said fixed length mater frame~~.

17. (Original). The digital broadcasting transmitter of claim 16, wherein said digital broadcasting transmitter is a digital audio broadcasting transmitter.

18. (Original). A digital broadcasting receiver comprising:

a digital de-modulator for de-modulating a modulated fixed length master frame to derive a fixed length master frame;

a de-formatter coupled to said digital de-modulator for removing a plurality of synchronization patterns and a plurality of random data bits to derive a plurality of variable length data frames corresponding to segments of a first analog signal; and

a variable rate decoder coupled to said de-formatter, said variable rate decoder decoding said plurality of variable length data frames corresponding to said segments and producing a second analog signal.

19. (Original). The digital broadcasting receiver of claim 18, wherein said digital broadcasting receiver is a digital audio broadcasting receiver.